REMARKS/ARGUMENTS:

Applicants wish to thank the examiner for the careful consideration given the present application as reflected in the Office action of May 16, 2008. The claims in the case have been carefully reviewed in light of the Office action and the amendments to the claims submitted herewith and the remarks set forth below are presented based on that review.

Rejections Based on Prior Art

Claims 26-28, 30-36, 42-45, 49 and 51-55 have been rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,725, 932 to Iio et al. (hereinafter referred to as "Iio"). In response to this rejection, the claims have been amended to more clearly distinguish Applicants' invention from Iio. In particular, Iio provides machining tools that include a ceramic-based substrate on which is coated a hard film such as a film of diamond. Therefore, it is the hard film and not the ceramic-based substrate that would engage any element being machined or otherwise contacted by the tools of Iio. To distinguish Applicants' invention from Iio, all the claims in the case, other than claims 36, 55 and 61, state that the invention comprises a working member at least a part of which is made from a ceramic material and that at least one cutting edge and/or toothing is provided in the outer surface of the at least part of the working member and that the cutting edge and/or toothing consists of a ceramic material, i.e., the cutting edge and/or toothing would not have a film as taught by Iio. This limitation makes clear that it would be the ceramic material of the instruments of Applicants' invention that would engage any element being machined or otherwise contacted as distinguished from Iio where it is the film such as diamond that would be in contact with the element being worked or treated. A corollary to this difference is the further distinction between Iio and Applicants' invention such that in Applicants' invention, the surface roughness of the ceramic material, including the cutting edges and/or toothing, is in the range of 0.5 μm to 6 μm whereas Iio does not disclose the surface roughness of the tool coated with a hard film. While it is true that Iio discloses that his ceramic substrate has a roughness of 2 μm to 20 μm, as illustrated in FIG. 12 of Iio, once the hard film such as diamond is applied to the ceramic-based substrate, the surface roughness is dramatically decreased. As shown

in FIG. 12, the underlying roughness of the surface of the ceramic-based substrate is not reflected in the surface roughness of the diamond film. The consequence of this difference is that with Applicants' invention, the cutting or machining would be done with a cutting edge and/or toothing having a significantly greater roughness than the roughness of the Iio tools.

The matter of surface roughness is an important aspect of Applicants' invention. Thus, as disclosed at page 2 of the specification of the present application, the surface roughness disclosed and claimed according to Applicants' invention increases the strength of the instruments. The occurrence of micro-cracks, which would lead to breakage and failure of the instrument is reliably prevented. This is particularly important in the case of instruments having small dimensions. It is noted that with respect to claims 36, 55 and 61, which state that the surface of the at least part of the working member made from the ceramic material is provided with a hard layer, that the surface roughness distinction between Iio and Applicants' invention is equally applicable.

With respect to claims 30-33, Applicants respectfully submit that the examiner has mischaracterized how the "core reinforcement" structure has been described in the specification. Specifically, the core reinforcement is defined as that part of the working member that underlies and is not penetrated by the grooves or cuts in the working member and, with reference to FIG. 6, is identified as that portion of the working member that is shown in cross-section as lying inwardly of the cutting edges or teeth of the working member. There is nothing "fanciful" about this description. It is apparent that the core reinforcement could have a variety of shapes depending on several factors including the depth of the grooves or cuts in the working member and the arrangement of those grooves or cuts. Thus, the core reinforcement could be conical in shape where the depth is reduced from the free end to the shaft of the instrument. The fact that the shape is referred to as being "imaginary" simply means that in order for the shape to be visualized, reference must be made to the depth of the grooves or cuts. And as has been previously noted, Iio does not disclose a structure where the depths of the grooves or cuts are reduced from the free end to the shaft of the working member as called for in claims 30-33.

With respect to claims 35 and 45, claim 35 has been cancelled since it is essentially a duplicate of claim 34 and claim 45 has been amended to delete the reference to the surface of the working member being ground.

With respect to claim 51, the claim does not, despite the examiner's assertion to the contrary, recite an intended use but, rather, states that the rotating instrument comprises a dental instrument. The claim thereby incorporates such structural features as accompany dental instruments.

Claims 26-45, 47, 48 and 51-63 have been rejected under 35 U.S.C. 103(a) as unpatentable over Iio in view of U.S. Patent Application Publication No. 2002/0028422 (hereinafter referred to as "Kumar"). This combination of references does not meet the terms of Applicants' claims for the same reasons that Iio alone does not, as discussed above. In other words, Applicants' claims state that the invention includes a working member at least a part of which is made from a ceramic material and that at least one cutting edge and/or toothing is provided in the outer surface of the at least part of the working member and that the cutting edge and/or toothing consists of a ceramic material. The combination of the Iio and Kumar patents, on the other hand, does not provide a cutting edge and/or toothing that consists of a ceramic material since any cutting edge and/or toothing provided by combining Iio and Kumar would have a non-ceramic coating film. Further, the roughness of the surface of the ceramic material, including the cutting edge, of an instrument provided by a combination of the Iio and Kumar references would be less than that set forth in Applicants' claims and the significance of this difference is discussed above.

Conclusion

It is respectfully submitted that the claims pending in the present application are patentable for the reasons set forth above, and the Examiner is respectfully requested to allow the claims and issue a notice of allowance. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. HOEF-37546.

Respectfully submitted,

PEARNE & GORDON LLP

Date: August 15, 2008

By: /thaddeusazalenski/
Thaddeus A. Zalenski, Reg. No. 22926

1801 East 9th Street
Suite 1200
Cleveland, Ohio 44114-3108
(216) 579-1700